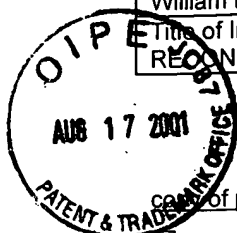


GAY 2821 #5

TRANSMITTAL LETTER			Case No. 10599-10
Serial No. 09/845,666	Filing Date April 30, 2001	Examiner To Be Assigned	Group Art Unit 2821
Inventor(s) William E. McKinzie III et al.			
Title of Invention RECONFIGURABLE ARTIFICIAL MAGNETIC CONDUCTOR			



TO THE COMMISSIONER FOR PATENTS

Transmitted herewith is Transmittal Letter (in dup.); Information Disclosure Statement; PTO Form 1449 of prior art references A1 - A25 and return post card evidencing receipt.

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- ☐ Small entity status of this application under 37 CFR § 1.27 has been established by verified statement previously submitted.
- ☐ A verified statement to establish small entity status under 37 CFR §§ 1.9 and 1.27 is enclosed.
- ☐ Petition for a \_\_\_\_\_ month extension of time.
- ☐ No additional fee is required.
- ☐ The fee has been calculated as shown below:

					Small Entity		Other Than Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	Rate	Add'l Fee
Total		Minus			x \$9=		x \$18=	
Indep.		Minus			x 40=		x \$80=	
First Presentation of Multiple Dep. Claim					+\$135=		+\$270=	
					Total add'l fee	\$	Total add'l fee	\$

- ☐ Please charge Deposit Account No. 23-1925 (BRINKS HOFER GILSON & LIONE) in the amount of \$\_\_\_\_\_. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$\_\_\_\_\_ to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this communication or credit any overpayment to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.
- ☒ I hereby petition under 37 CFR § 1.136(a) for any extension of time required to ensure that this paper is timely filed. Please charge any associated fees which have not otherwise been paid to Deposit Account No. 23-1925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

John G. Rauch  
Registration No. 37,218  
Attorney for Applicant

BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, ILLINOIS 60610 - (312) 321-4200

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on August 15, 2001.

Date: 8/15/01 Signature:

I hereby certify that this correspondence is being deposited with the United States Postal Service, with sufficient postage, as first class mail in an envelope addressed to: Commissioner for Patents  
Washington, D.C. 20231



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August 15, 2001

Date of Deposit

John G. Rauch, Reg. No. 37,218

Name of applicant, assignee or  
Registered Representative

Signature

8/15/01

Date of Signature

Our Case No. 10599-10

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

William E. McKinzie III et al.

Serial No. 09/845,666

Filing Date: April 30, 2001

For RECONFIGURABLE ARTIFICIAL  
MAGNETIC CONDUCTOR

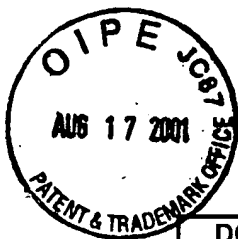
)  
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) Examiner: To Be Assigned  
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) Group Art Unit: 2821  
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## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Pursuant to the obligation under 37 C.F.R. § 1.56 and in conformance with 37 C.F.R. §§ 1.97-1.99, Applicants hereby submit the references listed below and on the attached form PTO-1449 for consideration by the Examiner. Copies of the references are enclosed herewith.



## US PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	NAME
6,175,337 B1	01/16/2001	Jasper, Jr. et al.

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## FOREIGN PATENT DOCUMENTS

DOCUMENT NUMBER	DATE	COUNTRY
WO 99/50929	10/07/99	WIPO
WO 01/24313 A1	04/05/01	WIPO

## OTHER ART (Including Author, Title, Date, Pertinent Pages, etc.)

R. J. King and K.S. Park, "Synthesis of surface reactances using grounded pin bed structure," <i>Electronics Letters</i> , Vol 17, 1981, pp. 52-53.
S. M. Sze, "Physics of Semiconductor Devices - Chapter 2.7.4 Varactor", published by Wiley & Sons, 1981, pp 114-122.
Ray. J. King, David. V. Theil, and Kwang S. Park, "The synthesis of surface reactances using an artificial dielectric," <i>IEEE Trans. Antennas and Propagation</i> , vol AP-31, no. 3, May 1983, pp. 471-476.
R. M. Walser et. al., "New smart materials for adaptive microwave signature control," <i>Proceedings of the Society of Photo-Optical Instrumentation Engineers (SPIE)</i> , Vol 1916, 1993, pp. 128-134.
John C. Vardaxoglou, "Frequency Selective Surfaces: Analysis and Design," Research Studies Press Ltd, Copyright 1997, pp 1-9, 18-73, 116-152 and 221-273.
Daniel F. Sievenpiper, "High-impedance electromagnetic surfaces," Ph.D. dissertation, UCLA electrical engineering department, filed January 1999
D. Sievenpiper, L. Zhang, and E. Yablonovitch, "High-impedance electromagnetic ground planes," <i>IEEE Intl. MTT Symp.</i> , June 13-19, 1999, Anaheim, CA
D. Sievenpiper, R. Broas, and E. Yablonovitch, "Antennas on high-impedance ground planes," <i>IEEE Intl. MTT Symp.</i> , June 13-19, 1999, Anaheim, CA
L. Zhang, N. G. Alexopoulos, D. Sievenpiper, and E. Yablonovitch, "An efficient finite-element method for the analysis of photonic bandgap materials," <i>IEEE Intl. MTT Symp.</i> , June 13-19, 1999, Anaheim, CA
Dan Sievenpiper, Lijun Zhang, Romulo F. Jimenez Broas, Nicolaos G. Alexopoulos, and Eli Yablonovitch, "High-impedance electromagnetic surfaces with a forbidden frequency band," <i>IEEE Trans. Microwave Theory and Techniques</i> , Vol. 47, No. 11, November 1999, pp. 2059-2074.
Ruey Bing Hwang and Song Tsuen Peng, "Guidance Characteristics of Two-Dimensionally Periodic Impedance Surface", <i>IEEE Trans. Microwave Theory and Techniques</i> , Vol. 47, No. 12, December 1999, pp. 2503-2511.
Rudolfo E. Diaz, James T. Aberle, and William E. McKinzie III, "TM mode analysis of a Sievenpiper high-impedance reactive surface," <i>IEEE Intl. Antennas and Propagation Symp.</i> July 16-21, 2000, Salt Lake City, Utah. pp. 327-330.
M. Rahman and M. A. Stuchly, "Equivalent circuit model of 2D microwave photonic bandgap structures," <i>URSI National Radio Science Meeting</i> , July 16-21, 2000, Salt Lake City, Utah, pp. 322.

G. Poilasne and E. Yablonovitch, "Matching antennas over high-impedance ground planes," <i>URSI National Radio Science Meeting</i> , July 16-21, 2000, Salt Lake City, Utah, pp. 312.
H. Y. D. Yang, R. Kim and D. R. Jackson, "Surface-Wave Band Gaps and Leaky Modes On Integrated Circuit Structures With Planar Periodic Metallic Elements", IEEE MTT-S Digest, Copyright 2000, pp 1521-1524
R. B. Hwang, S. T. Peng and C. C. Chen, "Surface-Wave Suppression of Resonance-Type Periodic Structures", IEEE MTT-S Digest, Copyright 2000, pp 1525-1528
Ben A. Munk, " <i>Frequency Selective Surfaces, Theory and Design</i> ," John Wiley and Sons, New York, Copyright 2000, pp 26-62 and 279-314.
R. J. King and S. W. Cho, "Surface Impedance Planes", Dept. of Electrical and Computer Engineering, University of Wisconsin, Copyright 2000, 16 pages
D. Sievenpiper, H. Hsu, J. Schaffner R. Garcia and S. Ontiveros, "Low Profile, Four Sector Diversity Antenna on High Impedance Ground Plane," <i>Electronics Lett.</i> , Vol. 36, No. 16, 1999, 2 pages
Keisuke Kageyama et al., "Tunable Active Filters Having Multilayer Structure Using LTCC", IEEE, Copyright 2001, 4 pages
Dan Sievenpiper, et al., "Electronic Beam Steering Using A Varactor-Tuned Impedance Surface," <i>IEEE Antennas and Propagation Society Intl. Symp</i> , Vol. 1, as presented at the IEEE Antennas and Propagation International Symposium in Boston, MA., July, 2001, pp. 174-177.
Briefing Charts in color as presented at the IEEE Antennas and Propagation International Symposium in Boston, MA.

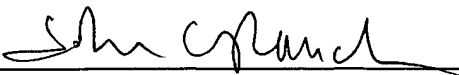
The filing of this Information Disclosure Statement does not constitute an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b). Further, Applicants reserve the right to contest these references as prior art against the present application, and Applicants do not believe that the disclosure of these references, even if finally determined to be prior art, anticipates Applicant's invention or that these references make Applicant's invention obvious.

This Information Disclosure Statement is being filed prior to the receipt of the first Official Action reflecting an examination on the merits and hence is believed to be timely filed in accordance with 37 C.F.R. § 1.97(b). No fees are believed to be due in connection with filing of this Information Disclosure Statement. However, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is hereby authorized to deduct said fees from Brinks Hofer Gilson & Lione Deposit Account No. 23-1925.

Applicants respectfully request that the Examiner review the entire disclosure of these documents and make them of record.

Respectfully submitted,

Date August 15, 2001

  
\_\_\_\_\_  
John G. Rauch  
Registration No. 37,218  
Attorney for Applicant

BRINKS HOFER GILSON & LIONE  
P.O. BOX 10395  
CHICAGO, ILLINOIS 60610  
(312) 321-4200